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AF/1755

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

D. COMMEREUC et al.

Examiner: J. Pasterczyk

Serial No.: 09/580,179

Group Art Unit: 1755

Filed: May 26, 2000

Title: CATALYTIC COMPOSITION AND ITS APPLICATION TO OLEFIN OLIGOMERIZATION

REPLY BRIEF

Mail Stop Appeal Brief -Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following discussion is in response to the points raised in the Examiner's Answer. The discussion approximately follows the order of these points as they occur in the Answer.

Appellant's Summary of Invention is Sufficient

At page 2, the Answer objects to the Summary of the Invention apparently because Appellants have chosen to summarize the invention in its broadest aspect, as recited in claim 21, and have not restricted their Summary of the Invention to the slightly less broad recitation of claim 1. It is not seen that this is a basis for objecting to the Summary.

Commonality of Assignee and Inventor is Irrelevant in a Determination of Non-Obviousness

At page 4, the answer appears to find it significant that both references in the present application are commonly assigned, and possess a common inventor. If such were a factor

negating non-obviousness, it is not seen that it would be possible to patent a selection invention. Indeed, it could be presupposed that selection inventions quite commonly are the subject of commonly assigned applications and of applications where there is a commonality of inventors, inasmuch as the subject matter of the particular art area involved in such applications would be of interest to a particular assignee. In any event, it is submitted that the observations in the first full paragraph of page 4 of the Answer are not relevant.

Preconditioning as Claimed in the Present Claim Does Not Read on Conducting the Actual Reaction as in Chauvin II

In the paragraph bridging pages 4 and 5 of the Answer, it is apparently argued that the use of the open term "comprising" in the present application somehow opens the claim to the conducting of the catalyzed reaction as disclosed in Chauvin II. However, as noted in the last paragraph of page 4 of the Office Action, the reference discloses adding all reagents simultaneously to the reactor in which the reaction is to be performed, *along with the feedstock for the catalyzed reaction*. Thus, the reaction commences as soon as these components are combined and "preconditioning": reaction of the catalyst components prior to the main reaction, cannot occur. Despite this, it is argued in the Answer that the use of the term "comprising" herein does not bar the use of unsaturated hydrocarbon feedstock. Regardless of the accuracy of this assertion, it is maintained that this disclosure does not suggest preconditioning, since the patent teaches commencement of the reaction immediately.

Moreover, at the top of page 5 of the Answer, it is argued that the "controlled time and temperature of the prior art reaction certainly would have suggested some sort of 'preconditioning' of the catalyst reactants in that it would have been impossible to prevent compounds mixed together in the same vessel from reacting in some way...". Indeed, this may be true, and inasmuch as the unreacted feedstock is present at this point, it can be seen that the reaction would be one which is to be catalyzed. "Preconditioning" thus does not occur in this scenario theorized in the Answer.

Finally, while the paragraph in the Answer concludes that the "extra steps of the prior art are not barred" in the present claims, the "extra step" apparently meant is conducting of the

reaction, which *per se* eliminates preconditioning. Indeed, the present claims lack steps of the prior art, rather than contain extra steps.

Chauvin I Remains Irrelevant as Directed to a Different Catalyst

As noted in Appellants' Brief, Chauvin I is directed to a catalyst composition comprising nickel, and aluminum hydrocarbyl halide and an epoxy compound. Thus, this patent lacks the Brönsted acid of Chauvin II. The paragraph bridging pages 5 and 6 of the Answer attempts to bootstrap the combination of these references by arguing that each shows that the catalyst without the Brönsted acid or without the epoxy compound retains some activity. Regardless of any accuracy of this assertion, one of ordinary skill in the art would not generalize that a treatment which is advantageous for the epoxy-containing catalyst would similarly be advantageous for the Brönsted acid-containing catalyst, inasmuch as these are clearly different catalysts. Each patent teaches that the third component increases activity of the other two, according to the Office Action. Thus, the third component, assuming the accuracy of this assertion in the Answer, clearly has a non-negligible on catalyst performance. One of ordinary skill in the art, in the unpredictable area of catalysts (see *In re Doumani*, 281 F.2d 215, 126 U.S.P.Q. 408 (CCPA 1960))simply cannot assume that an advantageous treatment for one three component catalysts would be similarly advantageous when a critical component of that catalyst is changed.

The Answer is Based on Unsupported Speculation

At pages 6 and 7 of the Answer, the rationale underlying the rejection is revealed to be based on unsupported speculation. For example, the Answer argues that "it is also clear that both references contemplate the combination of all three components at least simultaneously with the addition of a feedstock. Inevitably some reaction among the three components would have occurred." No basis for the inevitability of such reaction is given, and it is submitted that this speculation is insufficient basis upon which the rejection can be based. Moreover, combination of all three catalysts components "at least simultaneously" with the addition of the feedstock is not the present invention.

The Answer continues, at the bottom of page 6, that "[o] ne of ordinary skill in the art, wishing a most active catalyst, would naturally have allowed the catalyst components to react together for sometime at some temperature in order to allow the active catalysts to form before its use regardless of which third component were added...". Again, where is the basis for this speculation? None is given. It is submitted, again, that this is insufficient basis to support the rejection.

There Appears to be Discontinuity in the Reasoning in the Answer

Finally, at page 8 of the Answer, several assertions are made which appear to be lacking in logical framework. In the first four lines of page 8, it is argued that the "[a]ppellants' assertion that neither reference discloses or teaches the simultaneous addition of all three catalyst components is merely selective reading of the references for what they prefer, not what they actually disclose." Indeed, simultaneous addition of the catalyst components is not the issue. Instead, it is preconditioning, as presently claimed, which is not disclosed in the references. Simultaneous addition is only a factor insomuch as it is clear that the references, following a broad generic disclosure of the reaction, clearly prefer and teach simultaneous addition *of the feedstock* with the catalyst, thus precluding conditioning. See the above discussion.

Moreover, the first full paragraph at page 8 argues that the *conducting of the oligomerization reaction* in Chauvin II with the olefin feedstock for three days at 42°C "suggests that deletion of the feedstock should result in a catalyst that does not require nearly so drastic condition to convert the amount of monomer used in these examples into the amount of product made therein." Frankly, Appellants simply do not understand what is attempting to be argued in this passage. Deletion of the catalyst, of course, would render the reaction essentially inoperable in oligomerization. One of ordinary skill in the art possesses no motivation to delete the feedstock and, in view of the failure of any of the references to teach preconditioning, one of ordinary skill in the art cannot make any conclusions as to whether reacting the catalyst, without feedstock, for three days at 42°C would do anything other than produce a very warm catalyst.

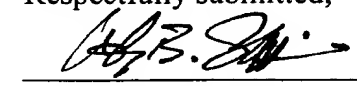
Finally, it is maintained that claims 1, 3-11, 6 and 19, which recite various times and temperatures for pre-conditioning, are further non-obvious over the references, compared to

claim 21, which more broadly recites preconditioning.

In conclusion, it is again respectfully maintained that the references fail to teach the presently claimed invention, and that ample basis to overturn the rejection exists. The same is respectfully requested.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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FILED: February 13, 2004

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